

WHAT IS CLAIMED IS:

1. A gaming machine comprising dividend determining means for determining a dividend to be paid to a bettor who has won a lottery with a predetermined probability, said lottery including a plurality of objects with predetermined probabilities of winning, and for indicating the dividend to the bettor, said dividend determining means comprising:

setting means for setting a target payout rate and the probability of winning of each of the objects and for setting odds on each of the objects based on the target payout rate and the probability of winning;

ordering means for arranging the objects in order of the probability of winning;

first correction means for approximately correcting the odds on the object in the highest place to odds with a predetermined number of digits, correcting the probability of winning of the object in the highest place based on the corrected odds, reflecting the difference between the uncorrected probability of winning and the corrected probability of winning of the object in the probability of winning of the object in the subsequent place, redetermining the odds on the object in the subsequent place based on the corrected probability of winning of the object in the subsequent place, and repetitively performing the whole

processing for the objects in all places; and

second correction means for approximately correcting the redetermined odds on the object in last place to odds with a predetermined number of digits, redetermining the probability of winning based on the approximated odds, and again reflecting the difference between the probability of winning and the redetermined probability of winning at predetermined ratios in the probabilities of winning of all the objects.

2. A gaming machine according to Claim 1, further comprising:

determining means for determining whether a payout rate based on the corrected probabilities of winning and the corrected odds is within a predetermined allowable range of the target payout rate;

wherein, when the determination by said determining means is negative, said dividend determining means resets the probabilities of winning and again performs the processing.

3. A gaming machine according to Claim 1, wherein said second correction means again reflects the difference between the probability of winning and the redetermined probability of winning in the probabilities of winning of

all the objects at the ratios among the probabilities of winning of the objects in all places.

4. A gaming machine according to Claims 2, wherein said second correction means again reflects the difference between the probability of winning and the redetermined probability of winning in the probabilities of winning of all the objects at the ratios among the probabilities of winning of the objects in all places.

5. A gaming machine comprising dividend determining means for determining a dividend to be paid to a bettor who has won a lottery with a predetermined probability, said lottery including a plurality of objects with predetermined probabilities of winning, and for indicating the dividend to the bettor, said dividend determining means comprising:

setting means for setting a target payout rate and the probability of winning of each of the objects and for setting provisional odds on each of the objects based on the target payout rate and the probability of winning;

ordering means for arranging the objects in order;

first correction means for approximately correcting the odds on the object in first place to odds with a predetermined number of digits, correcting the probability of winning of the object in the first place based on the

corrected odds, reflecting the difference between the uncorrected probability of winning and the corrected probability of winning of the object in the probability of winning of the object in the subsequent place, redetermining the odds on the object in the subsequent place based on the corrected probability of winning of the object in the subsequent place, and repetitively performing the whole processing for the objects in all places; and

second correction means for approximately correcting the redetermined odds on the object in last place to odds with a predetermined number of digits, redetermining the probability of winning based on the approximated odds, and again reflecting the difference between the probability of winning and the redetermined probability of winning at predetermined ratios in the probabilities of winning of all the objects.

6. An operation method for a gaming machine for determining a dividend to be paid to a bettor who has won a bet on a race with a predetermined probability, the race including a plurality of objects with predetermined probabilities of winning, and for indicating the dividend to the bettor, said operation method comprising the steps of:

setting a target payout rate and the probability of winning of each of the objects and setting odds on each of

the objects based on the target payout rate and the probability of winning;

rearranging data on the objects in descending order of the probability of winning; and

performing correction processing with said gaming machine, said correction processing including the steps of:

approximately correcting the odds on the object with the highest probability of winning to numeric data with a predetermined number of digits;

correcting the probability of winning based on the corrected odds;

obtaining the difference between the uncorrected probability of winning and the corrected probability of winning;

reflecting the difference in the probability of winning and in the odds on the object in the subsequent place;

repetitively performing the whole processing until the object with the lowest probability of winning is processed; and

allocating the difference in the probabilities of winning of the last object among the corrected probabilities of winning of the objects at predetermined ratios.

7. An operation method for a gaming machine for

approximately correcting the odds on the quinella bet with the highest probability of winning to numeric data with a predetermined number of digits, correcting the probability of winning based on the corrected odds, obtaining the difference between the uncorrected probability of winning and the corrected probability of winning, reflecting the difference in the probability of winning and in the odds on the quinella bet in the subsequent place, repetitively performing the whole processing until the quinella bet with the lowest probability of winning is corrected, and allocating the difference in the probabilities of winning of the last quinella bet in accordance with the corrected

probabilities of winning of the quinella bets;

reflecting the corrected probabilities of winning of the quinella bets in the probabilities of winning of the straight bets and redetermining the odds on the straight bets;

rearranging data on the straight bets in descending order of the probability of winning; and

performing correction processing with said gaming machine, said correction processing including the steps of:

approximately correcting the odds on the straight bet with the highest probability of winning to numeric data with a predetermined number of digits;

correcting the probability of winning based on the corrected odds;

obtaining the difference between the uncorrected probability of winning and the corrected probability of winning;

reflecting the difference in the probability of winning and in the odds on the straight bet in the subsequent place;

repetitively performing the whole processing until the straight bet with the lowest probability of winning is corrected; and

allocating the difference in the probabilities of winning of the last straight bet in accordance with the

corrected probabilities of winning of the straight bets.

8. An operation method according to Claim 7, wherein, when actual payout rates based on the corrected probabilities of winning and the corrected odds on the straight bets and the quinella bets are not within a predetermined range of the target payout rate, the probabilities of winning in straight betting and quinella betting are reset and the correction processing is performed again.

9. An operation method for a gaming machine for determining a dividend to be paid to a bettor who has won a bet on a race with a predetermined probability, the race including a plurality of objects with predetermined probabilities of winning, and for indicating the dividend to the bettor, said operation method comprising the steps of:

setting a target payout rate and the probability of winning of each of the objects and setting odds on each of the objects based on the target payout rate and the probability of winning;

rearranging data on the objects in order; and

performing correction processing with said gaming machine, said correction processing including the steps of:

approximately correcting the odds on the object in



first place to numeric data with a predetermined number of digits;

correcting the probability of winning based on the corrected odds;

obtaining the difference between the uncorrected probability of winning and the corrected probability of winning;

reflecting the difference in the probability of winning and in the odds on the object in the subsequent place;

repetitively performing the whole processing until the object in last place is processed; and

allocating the difference in the probabilities of winning of the last object in accordance with the corrected probabilities of winning of the objects.

10. An operation method according to Claim 9, further comprising the steps of:

again performing, when bets in straight betting and quinella betting are set, the correction processing for probabilities of winning and provisional odds in quinella betting;

reflecting the corrected probabilities of winning and the corrected odds in quinella betting in probabilities of winning and odds in straight betting; and

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